spasmodic clonic movements of choreic insanity are to be classed under this head.

Strabismus is common in all types of insanity and the permanent divergent squint Kellogg holds to be of unfavorable diagnostic import.

Cramps of all kinds are among the muscular anomalies to be noted among th einsane. The gastrocnemius is, perhaps, most frequently affected. These cramps are often painful and the source of insomnia, especially in neurasthenic and alcoholic cases. Tetanoid, epileptoid and cataleptoid may, among others, be distinguished.

The *pareses* and *paralyses* are probably the most serious of the muscular disorders. They are of every variety and form, according to the location of the lesion in the central nervous organs and peripheral nerves, and are of the same general character as those resulting from nerve lesion without mental disease. Therefore, it is unnecessary to review them more fully here. The well-known automatic movements so commonly seen in various forms of insanity, imbecility and idiocy, Kellogg also classes under the muscular affections, but many neurologists and alienists will doubtless not concur in this view.

The sensory disturbances of the muscular system are also concisely spoken of. Among these are to be mentioned the deviations in the muscular or kinæsthetic sense, namely, the muscular anæsthesias and hyperæsthesias, myalgias and lumbago. To the anomalies of the involuntary muscles, only a few lines are devoted.

Altogether Kellogg's paper is important and timely, in as much as the physical signs of demented persons are often neglected or overlooked, though they usually form factors of weight, both in the treatment and prognosis of nearly all cases which exhibit them.

STERNE.

ATTENTION AND "AUTOMATISMS" (IRRELEVANT MOTIONS).

Lindley (Clark University) describes a series of experiments with school children and adolescent pupils in the kindergarten and primary grades of the Boston Normal Training School. They were made in conjunction with President Stanley Hall for the purpose of finding the frequency of automatisms during various forms and degrees of attention. In all there were 662 cases tested (some subjects counted more than once), 235 were children of twelve years of age or under, and the rest were nearly all under twenty years of age. 421 were females, 241 males, and of the 235 children there were 117 girls and 118 boys. Of adolescents 304 were females and 125 males.

The first form of experiment was the drawing of straight and zigzag lines between perpendicular parallel lines extending between two horizontal parallel lines. Work continued fifteen minutes followed by an interval of five minutes, and then resumed for ten minutes more. They made large and small lines alternating for about equal lengths of time. The children were in groups of six or eight in number.

The average number of "automatisms" (irrelevant acts) per hundred was found to be, for children 124, adolescents 110. About half of the total number of automatisms belonged to parts of the head and face. Of single groups recorded, fingers and feet led in both children and adolescents. The lips ranked high in both lists. The head "automatisms" were much more frequent in children than adolescents, and the mouth, lips and tongue were not far behind. Swaying, the commonest of the body "automatisms," was almost entirely restricted to children. Playing and drumming with fingers were not so frequent with children as with adolescents. Girls led in swaying and finger automatisms, but boys led in tongue, feet and hand movements. The average number of "automatisms" per 100 girls was 179, boys 181.

Some groups gave the "automatisms" of writing, recitation, public recitation, reading, conversation, attention, study, difficult recollection and greatest effort. In these the following points were observed: Automatisms varied somewhat with the nature of the activity in question, *e. g.*, in writing, lips and tongue furnished 46% of all the automatisms; in reading, body, head, hands and fingers comprised more than half of the whole number; in recitation, feet, fingers and body led; in study it was fingers, eyes, hands and jaws, and so on. There were few automatisms of those muscles engaged in a given task. But when those parts which show greatest frequency of automatisms were pressed into actual performance of work, as the fingers in writing and the vocal organs in reading, the number of automatisms were not thereby apparently diminished. The average number of automatisms per 100 persons appears to increase slightly with the intensity of effort, *e. g.*, recitation, public recitation and conversation show an average of 120 automatisms per hundred; but attention, study, difficult recollection and greatest effort yielded 136. Also automatisms increase in number and intensity with age in the kindergarten—the class containing those of ages 3½ to 4 showing fewest and feeblest. In the primary group (ages 6 to 7) there was a marked falling off in automatisms as compared to the older children in the kindergarten. The automatisms of the youngest were chiefly of postures. Also the automatisms were more pronounced in making small movements, and in nearly every case the automatisms showed a somewhat rapid increase toward the end of the work period. The automatisms of the head (neck muscles), body, legs and arms were rather more than twice the number in children as compared to adolescents, being 9.7% and 4.4% respectively of all automatisms. CHRISTISON.

From American Journal of Psychology, July, 1896.

THERAPEUTICS.

REMOVAL OF THE TRUNK OF THE SUPERIOR MAXILLARY NERVE AND MECKEL'S GANGLION. McKay. Australasian Medical Gazette, January, 1897.

The patient, a man of 41, had 22 years before been shot in the left side of the face, the ball never having been removed. Three years before he came to McK. he had begun to suffer from severe neuralgia in the left side of the face. The cicatrix had first been dissected out, and the ball taken away, and later the Gasserian ganglion had been removed, without giving permanent relief. MacK. cut down and secured the infraorbital nerve, and with it as a guide, chiseled through both anterior and posterior walls of the antrum, removed the floor of the infraorbital canal, dissected out and took away a section of the nerve with Meckel's ganglion. The presence of the ganglion was shown by microscopical examination. Owing to bad surroundings, the patient got erysipelas in his wound, but recovered, and was free from neuralgia for three months. Later he had another attack of erysipelas, and has suffered since from neuralgia. It is considered by the author as remarkable that the pain persisted after the removal of the Gasserion ganglion in the earlier operation. He seems to think, however, that there is some question as to whether it was really removed.

C. L. ALLEN.

NERVE SUTURE. Gaz. Hebd. de Med. et de Chi., February 7, 1897.

In a thesis Ehrmann reviews the history of suture of widely spread nerve ends, which he considers necessary when the distance between the two extremities is greater than 2 c. m., believing that some sort of a way must be prepared from the centre to the peripheral end. The proceeding is only necessary when there has been a loss of nerve sub-